

P A T E N T

INSTITUT FRANÇAIS DU PÉTROLE

**PROCESS AND APPARATUS EMPLOYING A PLURALITY OF CATALYTIC BEDS
IN SERIES FOR THE PRODUCTION OF LOW SULPHUR GAS OIL**

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ABSTRACT

A process for hydrotreating gas oil comprises:

- A first gas oil desulphurisation step carried out in a first catalytic zone comprising a desulphurisation catalyst;
- at least partial elimination of the hydrogen sulphide formed at the end of the first step;
- one or more desulphurisation steps carried out in one or more catalytic zones comprising a desulphurisation catalyst. Desulphurisation in this reactor is more effective because of the much lower H₂S partial pressure; the distribution of the catalyst in the different zones is selected so as to maximise the catalytic activity, and thus minimise the volume of catalyst required for a unit of a given capacity operating at fixed operating temperature and pressure, so as to obtain an intensely desulphurised gas oil.